BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Application of Milwaukee Water Works, Milwaukee County, Wisconsin, for Authority to Increase Water Rates	**3720-WR-107**

DIRECT TESTIMONY OF ANDREW BEHM

April 23, 2010

1   **Q.**   **State your name, occupation, and business address.**

2   A.   My name is Andrew Behm. Since February 2008, I have been employed as a Public

3   Utility Rate Analyst by the Public Service Commission (Commission) at 610 North

4   Whitney Way, Madison, Wisconsin.

5   **Q.**   **State your educational background.**

6   A.   I graduated in 2007 from the University of Wisconsin at Madison with a Bachelor of

7   Science in Economics. I attended the Utility Rate School sponsored by the National

8   Association of Regulatory Utility Commissioners (NARUC) Committee on Water in

9   2008.

10   **Q.**   **State your work responsibilities.**

11   A.   As a Public Utility Rate Analyst, I perform cost of service analyses and design utility rates.

12

13   **COST OF SERVICE STUDY TESTIMONY**

14   **Q.**   **What is the purpose of your cost of service study testimony in this proceeding?**

15   A.   The purpose of my cost of service study testimony is to present and explain my analysis

16   of Milwaukee Water Works' (MWW) cost to serve its several customer classes. The cost

1		of service study is the basis for the rates proposed in Schedules 12, 13, and 14 of Exhibits
2		12.2 and 12.4.
3	**Q.**	**Did you prepare Exhibit 12.2 (PSC REF#: 129346)?**
4	A.	In part. I prepared Schedules 1 through 11A. Schedules 12, 13, and 14 were prepared by
5		David Prochaska of Commission staff.
6	**Q:**	**Please describe Schedules 1 through 11A of Exhibit 12.2.**
7	A:	Exhibit 12.2 contains the following Schedules:
8		Schedule 1 – Comparative Income Statement
9		Schedule 2 – Net Investment Rate Base and Estimated Income Statement
10		Schedule 3 – Utility Financed Plant and Depreciation Expense
11		Schedule 4 – Calculation of System Demand Ratios
12		Schedule 5 – Allocation of Utility Financed Plant to Cost Functions
13		Schedule 5A – Allocation of Total Plant to Cost Functions
14		Schedule 6 – Allocation of Depreciation Expense to Cost Functions
15		Schedule 7 – Allocation of Operation and Maintenance Expenses to Cost Functions
16		Schedule 8 – Summary of Allocation of Operating Costs to Cost Functions
17		Schedule 9 – Base, Max Day, and Max Hour Demands by Customer Class
18		Schedule 10 – Meters, Equivalent Meters, and Equivalent Services by Customer Class
19		Schedule 11 – Allocation of Cost Functions to Customer Classes and Comparison with
20		Present Revenues
21		Schedule 11A – Allocation of Public Fire Protection Costs to Customer Classes and
22		Comparison with Present Revenues

1 **Q: What model did you use to allocate MWW's operating expenses to the cost functions**

2   **and thence to the customer classes?**

3 A: I used the base - extra capacity model presented by the American Water Works

4   Association (AWWA) in its *Principles of Water Rates, Fees, and Charges: Manual of*

5   *Water Supply Practices, M1*, Fifth Edition, 2000. The Commission has a long precedent

6   of using the base - extra capacity model to analyze cost of service for virtually all water

7   utilities in the state.

8   Under this method, each account shown on Schedules 5, 5A, 6, and 7 is allocated

9   to several cost functions based on the system demand ratios calculated on Schedule 4.

10   The cost functions are: base system and distribution costs; max day system and

11   distribution costs; max hour system, distribution, and storage costs; customer billing,

12   meter, and service costs; and costs directly related to the provision of water for public fire

13   protection. Schedule 8 summarizes the total cost allocated to each cost function.

14   These cost functions are then allocated to the customer classes based on the

15   demand factors shown on Schedule 9 and the number and sizes of meters shown on

16   Schedule 10. Base cost functions are allocated in proportion to each class's projected

17   total consumption of water in the test year. Extra-capacity, i.e. max day and max hour,

18   cost functions are allocated in proportion to each class's projected maximum day and

19   hour consumption during the test year. Maximum day and hour consumption is calculated

20   from extra-capacity ratios. An extra-capacity ratio is the ratio of the volume by which the

21   maximum consumption in a period exceeds the average (extra capacity) to the annual

22   average consumption in that period (base). The extra-capacity ratios used in this case are

23   based on actual data when data is available. In the absence of actual data, I chose demand

1		ratios consistent with past MWW rate cases and recent rate cases for other large
2		Wisconsin utilities providing a significant amount of wholesale service. Customer costs
3		are allocated in proportion to the number of meters, equivalent meters, and equivalent
4		services in each customer class as shown on Schedule 10. Direct fire protection costs are
5		allocated entirely to the public fire protection class.
6	**Q:**	**Please describe Schedules 1 through 3.**
7	A:	Schedules 1 through 3 combine data from MWW annual reports and Commission staff's
8		revenue requirement Exhibit 12.1. Schedule 1 shows historical and test year revenues and
9		expenses. Schedule 2 shows MWW's net investment rate base (NIRB) and an estimated
10		income statement for the 2010 test year. Schedule 3 shows plant accounts at the
11		beginning and end of 2010 as well as the average balance and test year depreciation by
12		account.
13	**Q:**	**Please describe Schedule 4.**
14	A:	This schedule calculates system demand ratios for MWW. The important ratios are the
15		base to max day ratio and the base to max hour ratio. These ratios are calculated from
16		average day pumpage, maximum day pumpage, and estimated fire flow. Average day
17		pumpage is calculated from water sales estimated by Bridgot Gysbers of Commission
18		staff divided by the four year average ratio of sales to pumpage. Maximum day pumpage
19		is calculated from average day pumpage multiplied by the maximum day to average day
20		ratio of 1.4. Maximum hour pumpage is calculated from average hour pumpage during
21		the average day multiplied by the maximum hour to average hour ratio of 1.7. In
22		developing the ratios, I looked at data supplied by MWW (PSC REF#: 129690). The
23		average ratio of maximum day to average day from 2004 through 2009 is 1.43, and the

1	average ratio of maximum hour to average hour is 1.73. I used the slightly lower values
2	of 1.4 and 1.7 to recognize the prevailingly downward trend since 2003. The ratios of 1.4
3	and 1.7 are significantly higher than the ratios of 1.32 and 1.38 experienced in 2009
4	because I wanted to be conservative in case the present trend turns out to be transitory.
5	Estimates for fire flow are based on population served as explained in the description of
6	Schedule 11A below.
7	This calculation of base to max day and base to max hour ratios departs from
8	Commission staff's previous practice for MWW rate cases. For the past several rate
9	cases, Commission staff did not directly estimate maximum day or hour consumption.
10	Instead it continued to use maximum day and maximum hour ratios very close to those
11	observed during the drought of 1988. During that year the maximum day consumption
12	was twice the average, and the maximum hour consumption was triple the average. In
13	past rate cases, Commission staff reasoned that those high peak ratios accurately
14	described the MWW system because it is presumably still able to supply those high peak
15	flows. This reasoning is valid, but the MWW system has changed significantly since
16	1988. Maximum day and hour consumption since 1988 has decreased in both absolute
17	terms and, with the exception of 1995, in comparison with the average day. Given
18	changes in MWW's customer base, even under conditions like those of 1988 it is
19	unlikely, if not impossible, that MWW will experience similar peak consumption in the
20	foreseeable future. Basing ratios on more recent history allows the model to better reflect
21	demands currently experienced by MWW and to more accurately capture those demands
22	in the cost of service.

1   **Q:**   **What is the effect of projecting maximum day and hour consumption based on**

2   **recent history rather than older information?**

3   **A:**   Analyzing more recent data led me to project lower maximum day and hour consumption

4   than Commission staff had in previous rate cases using older data. Lowering the

5   projected maximum day and hour consumption level increases the allocation to the base

6   cost factor and decreases the allocation to max day and max hour relative to the previous

7   rate case.

8   **Q:**   **Please describe Schedules 5, 5A, and 6.**

9   **A:**   Schedules 5, 5A, and 6 show, respectively, the allocation of MWW's utility financed

10   plant, total plant, and depreciation on utility financed plant to the several cost functions.

11   The allocation of each plant account is the same on each of these three schedules.

12   Plant accounts under the headings Source of Supply, Pumping Plant, and Water

13   Treatment Plant (Accounts 310 through 334) are allocated to base system and max day

14   system cost functions on the basis of the base to max day ratio calculated on Schedule 4.

15   In past rate cases, MWW's pumping facilities were categorized as major or minor

16   facilities. Major pumping plant was allocated to base system and max day system cost

17   functions, while minor pumping plant was allocated to base system and max hour system

18   cost functions. In the current case, I eliminated this distinction and allocated all pumping

19   plant to base system and max day cost functions. To state it another way, I classified all

20   pumping plant as major pumping plant. This change allows for a simpler analysis and

21   results in a distribution of costs between base and extra capacity cost functions which is

22   consistent with other large water utilities in Wisconsin.

1   Account 340, Land, is distributed to all cost functions based on the average

2   allocation of Accounts 342 through 348. I changed the allocation of Account 340 from

3   base system and max hour storage cost functions in the last case to the overhead

4   treatment to be consistent with Commission staff's standard cost of service model.

5   Plant Account 342, Reservoirs, is allocated to base system and max hour storage

6   based on the base to max hour ratio calculated on Schedule 4.

7   Plant Account 343, Mains, is separated into transmission and distribution mains

8   based on the main sizes and lengths, including mains outside the City of Milwaukee,

9   reported on Page W-19 of MWW's 2008 Annual Report. Consistent with past MWW rate

10   cases, mains larger than 12 inches in diameter are considered transmission mains. The

11   ratio of transmission and distribution mains based on length multiplied by diameter is

12   virtually unchanged from the ratio used in the last rate case. The total plant (utility

13   financed plus contributed) balance in Account 343 is divided between transmission and

14   distribution proportionately based on length multiplied by diameter of mains. The

15   transmission portion is allocated to base system and max day system cost functions based

16   on the base to max day ratio from Schedule 4. The distribution portion is allocated to

17   base distribution and max hour distribution cost functions based on the base to max hour

18   ratio from Schedule 4.

19   Account 345, Services, contains no balance, but it is allocated to the equivalent

20   services cost function. Account 346, Meters, is allocated completely to the equivalent

21   meters cost function. Account 348, Hydrants, is allocated completely to the direct fire

22   protection cost function.

1   Accounts under the heading of General Plant (389 through 398) are distributed to

2   all cost functions based on the average allocation of all other plant accounts.

3   **Q: Have you changed Commission staff's allocation of the utility financed plant**

4   **balance between transmission and distribution mains, compared to the allocation**

5   **method used in MWW's last rate case?**

6   A: Yes. In the present case, I have divided the utility financed balance in Account 343

7   between transmission and distribution based on the assumption that customer

8   contributions only fund distribution main. Because of this assumption the utility financed

9   transmission balance equals the total plant transmission balance. The remaining utility

10   financed plant balance is allocated to distribution. This is a change from the previous rate

11   case, which assumed customer contributions funded both distribution and transmission

12   mains in an equal proportion.

13   **Q: Why did you change the treatment of customer contributions from the last case?**

14   A: Although this change results in a higher utility financed balance of transmission mains

15   and a lower balance of distribution mains than the last case, the assumption on which it is

16   based is a more realistic treatment of customer contributions for mains.

17   **Q: What effect does this treatment of customer contributions have on the allocation of**

18   **costs among customer classes?**

19   A: This change increases the utility financed plant balance allocated to transmission mains

20   and decreases the utility financed plant balance allocated to distribution mains. This

21   change has two principal effects. First, transmission mains are allocated more to the base

22   cost function than are distribution mains. Industrial and wholesale customers bear

23   relatively more of the base cost function than other classes, so increasing the utility

1		financed plant balance allocated to transmission mains tends to increase the cost of
2		service for these classes. Second, distribution costs are not allocated to wholesale
3		customers, so increasing the utility financed plant balance allocated to transmission mains
4		tends to increase the cost of service for wholesale customers.
5	**Q:**	**Will you change your exhibit if better information is provided for the division of the**
6		**utility financed plant balance for mains between transmission and distribution?**
7	A:	Yes. Lawrie Kobza provided Commission staff with actual original cost plant balances
8		for transmission and distribution mains on April 21, 2010. I intend to follow up with
9		MWW to confirm the numbers and to see if MWW can provide any further information
10		relevant to the distinction between transmission and distribution mains. Pending review, I
11		intend to incorporate this information into the cost of service study.
12	**Q:**	**Please explain Schedule 7.**
13	A:	Schedule 7 shows the allocation of Operation and Maintenance Expenses to the cost
14		functions. The allocations are similar to the corresponding plant accounts.
15		Pumping and Treatment Expenses (Accounts 620 through 652), with the
16		exception of Accounts 623 and 641, are allocated to base system and max day system
17		cost functions based on the ratio of base to max day from Schedule 4. Accounts 623,
18		Power, and 641, Chemicals, are allocated entirely to the base system cost function
19		because these expenses vary in direct proportion to the volume of water produced.
20		Transmission and Distribution Expenses (Accounts 660 through 678) are
21		allocated the same way as the corresponding plant accounts except Accounts 660, 665,
22		666, and 678. These are, respectively, Operating Supervision and Engineering,
23		Miscellaneous Expenses, Rents, and Maintenance of Miscellaneous Plant. These four

1		accounts are distributed to all cost functions based on the average allocation of Accounts
2		662, 663, and 672 through 677. The average allocation of Accounts 660, 665, 666, and
3		678 is a change from Commission staff's practice in previous MWW rate cases, but it is
4		consistent with the practice for all other utilities. I also changed the division of Accounts
5		662 and 673, Line Expenses and Maintenance of Mains, between transmission and
6		distribution mains from the last rate case.
7		Customer Accounts Expenses are allocated entirely to the billing cost function.
8		Administrative and General Expenses, with the exception of Account 924, Property
9		Insurance, are distributed to all cost functions based on the average allocation of all other
10		expense accounts. The expense for Property Insurance is allocated based on the
11		percentage of total plant in each cost function as shown on Schedule 5A.
12	**Q:**	**Please explain how you changed the distribution of Accounts 662 and 673 between**
13		**transmission and distribution mains from the last rate case?**
14	A:	In the 2007 rate case, Commission staff divided Operations and Maintenance Expenses
15		relating to mains on the basis of length times diameter of mains over 12 inches compared
16		to mains 12 inches or smaller. In this cost of service study, I followed Commission staff's
17		standard practice of dividing Accounts 662 and 673 on the basis of feet of transmission
18		and distribution main. The new method increases the expenses allocated to distribution
19		main. Because distribution cost functions are not allocated to wholesale customers, this
20		change benefits wholesale customers.
21	**Q:**	**Please describe Schedule 8.**
22	A:	Schedule 8 summarizes the allocations of Operation and Maintenance Expenses,
23		Depreciation Expense, Taxes and Tax Equivalent, and Return on NIRB to the different

1	cost functions. The first two lines, Operation and Maintenance and Depreciation, are
2	taken directly from Schedules 7 and 6, respectively. Taxes are allocated based on the
3	percentage of total plant in each cost function as shown on Schedule 5A. I allocated
4	Return on NIRB to each cost function for each of the two differential rates of return, 5.50
5	percent for retail classes and 6.50 percent for wholesale classes, based on the percentage
6	of utility financed plant in that cost function as shown on Schedule 5. I then distributed
7	each of the Return on NIRB allocations to the customer classes to which they apply and
8	summed for each cost function the total allocation of Return on NIRB from all customer
9	classes. Schedule 8 shows this total Return on NIRB allocated to each cost function.

10	Q:	**Please describe Schedule 9.**
11	A:	Schedule 9 calculates the allocation of base system and distribution costs; max day
12		system and distribution costs; and max hour system, distribution, and storage costs to the
13		several customer classes.

14 Base system and distribution costs are allocated in proportion to the projected

15 volume of water sales to each class in the test year. Base system costs are allocated to all

16 classes. Base distribution costs are not allocated to West Milwaukee or wholesale

17 customers because they do not benefit from the MWW distribution system.

18 Max day system and distribution costs are allocated in proportion to the extra

19 capacity required for the projected maximum day consumption by each class. Maximum

20 daily extra capacity is estimated by multiplying the average day consumption by the max

21 day extra-capacity ratio. The max day extra-capacity ratio is, in decimal form, the

22 percentage by which maximum day consumption for a class exceeds its average day

1   consumption. As before, distribution costs are not allocated to West Milwaukee or

2   wholesale customers.

3   Max hour system, distribution, and storage costs are allocated in proportion to the

4   extra capacity required for the projected maximum hour consumption by each class.

5   Again, distribution costs are not allocated to West Milwaukee or wholesale customers.

6   Storage costs are not allocated to wholesale customers with the exception of Mequon and

7   Shorewood. Because Mequon and Shorewood do not have their own elevated storage,

8   they must rely on MWW's storage capacity to accommodate their max hour

9   consumption.

10 **Q: How do the extra-capacity ratios you used in this case compare to those used in past**

11   **rate cases?**

12   Many max day and max hour extra-capacity ratios used in this case differ from

13   the values used in previous rate cases.

14   The max day extra-capacity ratios for customers within the City of Milwaukee are

15   unchanged, but I have reduced the ratios for retail customers outside Milwaukee to match

16   those within Milwaukee. Treating customers on the same retail water system identically

17   in terms of extra-capacity ratios makes more sense than arbitrary distinctions based on

18   municipal boundaries. In practice, the effect of this change is negligible because the

19   general service rates to retail customers outside Milwaukee cannot be reduced below the

20   minimum set forth in Wis. Stat. § 62.69(2)(h). I recalculated max day extra-capacity

21   ratios for wholesale customers based on each utility's 2006 through 2008 Annual

22   Reports.

1   I believe the retail max hour extra-capacity ratios used in the previous rate case do

2   not accurately describe MWW's customer classes in this case. The customer base has

3   diminished to the point that customers are not likely to require the large maximum flows

4   they did in the late 1980s or early 1990s. This is essentially the same reasoning applied

5   earlier in calculating the system demand ratios. MWW could not provide maximum

6   hourly consumption data by class, so I reviewed the retail max hour extra-capacity ratios

7   used in the most recent rate cases of several other large utilities providing wholesale

8   service in Wisconsin. I reviewed recent rate cases for Racine, Oak Creek, Kenosha,

9   Menasha, Appleton, Sheboygan, and Beloit. Based on the values used in these cases, I

10   chose reasonable retail max hour ratios. As before, I used the same extra-capacity ratios

11   for retail customers inside and outside of the City of Milwaukee.

12   No historical data is available for wholesale max hour extra-capacity ratios. Based

13   on the review of the rate cases mentioned above, I estimated the ratio of maximum hour

14   consumption to average hour consumption for each wholesale customer to be 1.43 times

15   its ratio of maximum day consumption to average day consumption. I rounded max hour

16   ratios up to the nearest hundredth. For instance, the extra-capacity max day ratio for

17   Brown Deer is 0.89 meaning Brown Deer's maximum day consumption is 189 percent of

18   its average day consumption. 189 times 1.43 equals 271, so maximum hour consumption

19   is 271 percent of average hour consumption. This yields an extra-capacity max hour ratio

20   of 1.71 for Brown Deer.

21   It is my understanding that MWW will pursue metering improvements for

22   wholesale and large retail customers that will provide actual maximum day and hour

23   usage for future rate cases.

| 1 | **Q:** | **Please explain Schedule 10.** |

2   A: Page 1 on Schedule 10 lists the number and sizes of MWW's meters serving each

3   customer class. Billing costs are allocated to each class based on its percentage of the

4   total number of meters because the cost to bill a customer is independent of the size the

5   customer's meter.

6   Page 2 converts the number of meters for each size and class to a number of ⅝

7   inch meter equivalents. The weighting factors are listed across the top of the page. The

8   equivalent meter cost function is allocated to each class based on its percentage of the

9   total number of meter equivalents because these costs depend on the size of the meter.

10   Page 3 converts the number of meters for each size and class to a number of ⅝

11   inch service equivalents using different weighting factors. As before, the weighting

12   factors are listed across the top of the page. The equivalent service cost function is

13   allocated to each class based on its percentage of the total number of service equivalents.

14   These costs depend on meter size, but not as strongly as the equivalent meter cost

15   function.

16   **Q:**   **Please describe Schedule 11.**

17   A: Schedule 11 allocates each cost function to the several customer classes. The allocations

18   for base and extra capacity costs are calculated in Schedule 9, and the allocations for

19   customer costs are calculated in Schedule 10. The direct fire protection cost function is

20   allocated entirely to the public fire protection customer class. Other revenues, such as

21   unmetered sales, private fire protection revenues, forfeited discounts, and standby

22   revenues, among others, are allocated to the retail customer classes and public fire

23   protection. The total of all cost functions allocated to a customer class less other revenues

| 1 | allocated to the class is the cost of service for that class. Schedule 11 compares cost of |

1   allocated to the class is the cost of service for that class. Schedule 11 compares cost of

2   service to revenues at present rates and expresses the change as a percentage increase.

3   **Q:**   **Please describe Schedule 11A.**

4   A: Schedule 11A allocates the public fire protection customer class from Schedule 11 to the

5   retail and wholesale communities on the basis of estimated fire flows.

6   Fire flows are estimated based on the average of the maximum and minimum

7   Freeman's method, the National Board of Fire Underwriters' method, and the Kuickling

8   method. All of these methods are based on the population served by the utility.

9   Population information came from MWW, the wholesale communities, or, as a last

10   resort, the 2000 census. With the exception of Hales Corners, Mequon, and New Berlin,

11   total population is used as a proxy for population served. I adjusted the populations for

12   Hales Corners, Mequon, and New Berlin to account for residents not served by MWW.

13   Direct public fire protection costs are allocated among retail communities in

14   proportion to their estimated maximum fire flows. The direct public fire protection cost

15   function consists mainly of expenses relating to fire hydrants but also includes a portion

16   of general accounts allocated on a weighted average. Wholesale customer classes are not

17   allocated direct fire protection costs because they presumably do not receive water for

18   public fire protection through hydrants owned by MWW. This is consistent with past

19   MWW rate cases.

20   Indirect fire protection costs, i.e. base and extra capacity costs associated with the

21   provision of water for public fire protection, are allocated to all retail and wholesale

22   classes in proportion to their estimated fire flows.

ECONOMIC DEVELOPMENT RATE TESTIMONY

2 **Q:** **What is the purpose of your economic development rate testimony in this**

3 **proceeding?**

4 A: The purpose of my economic development rate testimony is to describe the economic

5 development rate (EDR) found in Exhibit 12.3 (PSC REF#: 129347), to explain how it

6 differs from the EDR requested by MWW, and to present a rationale for the differences.

7 **Q:** **Did you prepare Exhibit 12.3?**

8 A: Yes.

9 **Q:** **What is the basis for Exhibit 12.3?**

10 A: My starting point for developing Exhibit 12.3 was MWW's request dated February 4,

11 2010 (PSC REF#: 126780), for an economic development water rate.

12 **Q:** **Please describe Section 1 of Exhibit 12.3.**

13 A: Section 1 defines terms used in Exhibit 12.3.

14 **Q:** **Please describe Sections 2 and 3.**

15 A: Sections 2 and 3 explain the requisites for a customer to qualify for the EDR. The

16 customer, whether a new or existing customer, has to increase the volume of water it

17 buys from MWW per month by at least 1,500,000 gallons over its baseline consumption.

18 For an existing customer, the highest monthly volume in the two years preceding the

19 application is the customer's baseline consumption. Baseline consumption for a new

20 customer is zero. The customer must also submit a water use and efficiency plan and an

21 affidavit stating it would not have increased its consumption of utility water but for the

22 EDR.

1		MWW and the Milwaukee Metropolitan Sewerage District must certify that they
2		are able to provide the water and accept the wastewater without adversely affecting the
3		water treatment plant, the wastewater treatment plant, or Lake Michigan and without
4		increasing costs to other ratepayers.
5	Q:	**Please describe Section 4.**
6	A:	Section 4 explains the billing for a customer subject to the EDR. For fixed service
7		charges and water consumption up to the customer's baseline, standard general service
8		rates will apply. Consumption in excess of the baseline will be billed at a reduced volume
9		rate for five years.
10	Q:	**How are the reduced volume rates calculated?**
11	A:	I set the volume rate for the first year of the EDR at 120 percent of MWW's average
12		variable cost. I defined average variable cost as the total of Pumping and Treatment
13		Expenses, Accounts 620 through 652, divided by MWW's total volume of water sales to
14		all customers. I set the lowest volume rate at 120 percent of average variable cost, to
15		ensure economic development customers not only cover the variable costs of providing
16		service but also contribute to capital costs and fixed Operation and Maintenance
17		Expenses. The volume rate increases over the five-year term of the discount to minimize
18		rate shock when the rate expires and to progressively increase the benefit to other
19		ratepayers. The EDR ramps up to the lowest general service volume rate even though the
20		applicable rate may be higher, so rate shock may not be completely avoided in all cases.
21	Q:	**Please describe Sections 5 and 6.**
22	A:	Sections 5 and 6 lay out the ongoing requirements for a customer to remain eligible for
23		the EDR. In particular, a customer must exceed its baseline by 1,500,000 gallons per

1		month at least every other month and must follow cost effective-best management
2		practices.
3	**Q:**	**Please describe Sections 7, 8, 9, and 10.**
4	A:	Section 7 excludes water used for irrigation or cooling from qualifying for the EDR.
5		Section 8 opens the EDR for a one-year trial period, subject to extension with
6		Commission approval. Section 9 allows MWW to recover two years' worth of the
7		discount from a customer that loses eligibility and ceases to qualify for the EDR before
8		the end of its five-year term. Section 10 requires MWW to notify the Commission
9		whenever it approves a customer's application for the EDR. MWW is also directed to
10		annually file a summary of all economic development customers.
11	**Q:**	**In what areas does the EDR you propose in Exhibit 12.3 differ from that originally**
12		**requested by MWW?**
13	A:	MWW's original request differentiated between new and existing customers in the
14		incremental volume required to qualify for the discount and the duration of the discount.
15		Exhibit 12.3 removes these differences and treats new and existing customers equally.
16		Inasmuch as the purpose of the EDR is to decrease excess capacity, incremental
17		consumption is equally beneficial whether it is from new or expanding customers. I also
18		chose a volume threshold close to the higher of the two requested by the utility in order to
19		limit the EDR to water intensive industry and commerce.
20		MWW's original request requires a customer to create 25 jobs in order to qualify
21		for the EDR. Exhibit 12.3 does not include this requirement because it would be very
22		difficult, if not impossible, to authenticate job creation. The job creation requirement
23		would place onerous verification and reporting requirements on MWW. Finally, as

1   Exhibit 12.3 is structured, even if few or no jobs are created by a new or expanding

2   customer, MWW and its ratepayers can still benefit from the utilization of excess

3   capacity and the spreading of fixed costs.

4 **Q:**   **Does this conclude your direct testimony?**

5 A: Yes, it does.